

OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/803,126

DATE: 08/28/2001

TIME: 13:37:26

Input Set : A:\15303-31.app

Output Set: N:\CRF3\08282001\I803126.raw

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3 <110> APPLICANT: Brooks, Alan R.
4   Deng, Gary G.
5   Rubanyi, Gabor M.
7 <120> TITLE OF INVENTION: Estrogen-Regulated Unconventional Myosin-Related
8   Protein: Compositions and Methods of Use
10 <130> FILE REFERENCE: 015303-000310US
12 <140> CURRENT APPLICATION NUMBER: US 09/803,126
13 <141> CURRENT FILING DATE: 2001-03-09
15 <150> PRIOR APPLICATION NUMBER: US 60/188,488
16 <151> PRIOR FILING DATE: 2000-03-10
18 <160> NUMBER OF SEQ ID NOS: 35
20 <170> SOFTWARE: PatentIn Ver. 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 1337
24 <212> TYPE: PRT
25 <213> ORGANISM: Mus sp.
27 <220> FEATURE:
28 <223> OTHER INFORMATION: mouse myosin related protein (MRP)
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35           20           25           30
37 Leu Ala Arg Leu Gly Ser Arg Gly His Val Tyr Val Ile His Cys Leu
38           35           40           45
40 Asn Pro Thr Pro Gly Lys Ile Pro Gly Leu Leu Asp Val Gly His Val
41           50           55           60
43 Ala Glu Gln Leu Arg Gln Ala Gly Ile Leu Glu Ile Ile Gly Thr Arg
44   65           70           75           80
46 Ser Thr His Phe Pro Val Arg Val Ser Phe Gln Val Phe Leu Ala Arg
47           85           90           95
49 Phe His Ala Leu Gly Ser Gly Arg Gln Lys Ala Ala Ser Asp Gln Glu
50           100          105          110
52 Arg Cys Gly Ala Ile Leu Ser Glu Val Leu Gly Ala Glu Ser Pro Leu
53           115          120          125
55 Tyr His Leu Gly Val Thr Gln Val Leu Leu Gln Glu Gln Gly Trp Gln
56           130          135          140
58 Gln Leu Glu Gln Leu Trp Ala Gln Arg Arg Ser Gln Ala Leu Leu Thr
59 145          150          155          160
61 Leu His Arg Gly Leu Arg Ala Cys Ile Thr Arg Gln Arg Leu Arg Leu
62           165          170          175
64 Leu Pro Arg Met Gln Ala Arg Val Arg Gly Leu Gln Ala Arg Lys Arg
65           180          185          190
67 Tyr Leu Gln Arg Arg Ser Ala Leu Gly Gln Leu Asn Thr Ile Leu Leu
68           195          200          205
70 Val Ala Arg Pro Leu Leu Arg Arg Gln Lys Leu Arg Cys Ala Pro
71           210          215          220

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73 Gly Pro His Ser Gly Glu Pro Trp Gly Lys Val Ser Asn Met Asp Leu
74 225 230 235 240
76 Gly Arg Leu Glu Ile Pro Ala Gln Leu Ala Thr Leu Leu Glu Arg Ala
77 245 250 255
79 Glu Gly His Gln Ala Leu Leu Thr Gly Ser Ile Thr Glu Ser Leu Pro
80 260 265 270
82 Pro Glu Val Pro Ala Arg Pro Ser Leu Thr Leu Pro Pro Asp Ile Asp
83 275 280 285
85 Gln Phe Pro Phe Ser Ser Phe Val Ser Thr Ser Phe Gln Lys Pro Phe
86 290 295 300
88 Leu Pro Arg Pro Gly Gln Pro Leu Asp Glu Pro Leu Thr Arg Leu Asp
89 305 310 315 320
91 Gly Glu Asn Pro Gln Gln Ala Leu Glu Ile Asn Arg Val Met Leu Arg
92 325 330 335
94 Leu Leu Gly Glu Gly Ser Leu Gln Ser Trp Gln Glu Gln Thr Met Gly
95 340 345 350
97 Thr Phe Leu Val Gln Gln Ala Gln Arg Arg Pro Gly Leu Arg Asp Glu
98 355 360 365
100 Leu Phe Ser Gln Leu Val Ala Gln Leu Trp Arg Asn Pro Asp Glu Gln
101 370 375 380
103 Gln Asn Gln Arg Gly Trp Ala Leu Met Val Ile Leu Leu Ser Ser Phe
104 385 390 395 400
106 Ala Pro Thr Pro Ala Leu Glu Lys Pro Leu Lys Phe Val Ser Asp
107 405 410 415
109 Gln Ala Pro Ser Gly Met Ala Ala Leu Cys Gln His Lys Leu Leu Gly
110 420 425 430
112 Ala Leu Glu Gln Thr Pro Leu Ala Pro Met Ala Ser Arg Ser His Pro
113 435 440 445
115 Pro Thr Gln Leu Glu Trp Lys Ala Gly Leu Arg Arg Gly Arg Met Ala
116 450 455 460
118 Leu Asp Val Phe Thr Phe Asn Glu Glu Ser Tyr Ser Ala Glu Val Glu
119 465 470 475 480
121 Ser Trp Thr Thr Gly Glu Gln Phe Ala Gly Trp Ile Leu Gln Ser Arg
122 485 490 495
124 Gly Leu Glu Ala Pro Pro Arg Gly Trp Ser Val Ser Leu His Ser Gly
125 500 505 510
127 Asp Ala Trp Arg Asp Leu Pro Gly Cys Asp Phe Val Leu Asp Leu Ile
128 515 520 525
130 Gly Gln Thr Glu Asp Leu Gly Asp Pro Ala Gly Pro His Asn Tyr Pro
131 530 535 540
133 Ile Thr Pro Leu Gly Leu Ala Glu Ser Ile Pro Pro Ala Pro Gly Val
134 545 550 555 560
136 Gln Ala Pro Ser Leu Pro Pro Gly Leu Pro Pro Gly Pro Ala Pro Ile
137 565 570 575
139 Leu Ala Ser Ser Arg Pro Pro Gly Glu Ala Ser Lys Pro Glu Asn Leu
140 580 585 590
142 Asp Gly Phe Val Asp His Leu Phe Glu Pro Ala Leu Ala Pro Gly Phe
143 595 600 605
145 Ser Asp Leu Glu Gln Gly Trp Ala Leu Ser Arg Arg Met Lys Gly Gly

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146      610      615      620
148 Gly Ser Val Gly Pro Thr Gln Gln Gly Tyr Pro Met Val Tyr Pro Gly
149 625      630      635      640
151 Met Val Gln Ala Pro Ser Tyr Gln Pro Ala Met Ile Pro Ala Pro Met
152      645      650      655
154 Pro Val Met Pro Ala Met Gly Ala Val Pro Thr Met Pro Ala Met Met
155      660      665      670
157 Val Pro Pro Gln Pro Gln Pro Leu Val Pro Ser Leu Asp Ser Arg Gln
158      675      680      685
160 Leu Ala Leu Gln Gln Gln Asn Phe Ile Asn Gln Gln Ala Met Ile Leu
161      690      695      700
163 Ala Gln Gln Met Thr Thr Gln Ala Met Ser Leu Ser Leu Glu Gln Gln
164 705      710      715      720
166 Asn Gln Arg His Gln His Gln Ala Gln Thr Ser Gly Ala Thr Ser Gln
167      725      730      735
169 Pro Pro Pro Ser Thr Thr Ala Pro Lys Ala Lys Lys Pro Pro Ala Pro
170      740      745      750
172 Gln Glu Lys Pro Glu Ser Asn Leu Glu Pro Ser Gly Val Gly Leu Arg
173      755      760      765
175 Glu Asp Thr Pro Glu Glu Ala Glu Ser Lys Pro Gln Arg Pro Lys Ser
176      770      775      780
178 Phe Gln Gln Lys Arg Asp Tyr Phe Gln Lys Met Gly Gln Asp Pro Ile
179 785      790      795      800
181 Arg Val Lys Thr Val Lys Pro Pro Ala Lys Val Gln Ile Pro Gln Glu
182      805      810      815
184 Glu Met Glu Glu Thr Glu Glu Glu Glu Asp Glu Thr Ala Glu Leu Ser
185      820      825      830
187 Pro Pro Pro Pro Pro Pro Pro Val Val Lys Lys Pro Leu Lys Ala Ser
188      835      840      845
190 Arg Pro Lys Ala Val Lys Glu Asp Glu Ala Glu Pro Ala Gln Glu Glu
191      850      855      860
193 Val Pro Thr Gln Gly Glu Asp Pro Pro Val His Ser Ser Asn Ser Ala
194 865      870      875      880
196 Pro Gln His Pro Lys Pro Ser Arg Val Pro Pro Val Gln Ser Ser Asn
197      885      890      895
199 Ser Ala Pro Pro Arg Pro Gln Pro Ser Arg Glu Ile Arg Asn Ile Ile
200      900      905      910
202 Arg Met Tyr Gln Ser Arg Pro Gly Pro Val Ala Val Pro Val Gln Pro
203      915      920      925
205 Thr Arg Pro Ile Lys Thr Phe Gln Lys Lys Asn Asp Pro Lys Asp Glu
206      930      935      940
208 Ala Leu Ala Lys Leu Gly Ile Asn Gly Val His Leu Pro Leu Ser Thr
209 945      950      955      960
211 Ser Pro Asn Gln Gly Lys Ser Ser Pro Pro Ala Val Val Pro Arg Pro
212      965      970      975
214 Lys Ala Arg Pro Arg Leu Glu Pro Ser Leu Ser Ile Gln Glu Lys Gln
215      980      985      990
217 Gly Pro Leu Arg Asp Leu Phe Gly Pro Cys Ser Pro Asn Pro Pro Thr
218      995      1000      1005

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220 Ala Pro Ala Pro Pro Pro Pro Pro Ala Leu Pro Pro Pro Leu Ser Gly
221      1010      1015      1020
223 Glu Pro Lys Thr Pro Ser Val Glu Ser His Ala Leu Thr Glu Pro Met
224 1025      1030      1035      1040
226 Glu Asp Lys Asn Ile Ser Thr Lys Leu Leu Val Pro Ser Gly Ser Val
227      1045      1050      1055
229 Cys Phe Ser Tyr Ala Asn Ala Pro Trp Lys Leu Phe Leu Arg Lys Glu
230      1060      1065      1070
232 Val Phe Tyr Pro Arg Glu Asn Phe Ser His Pro Tyr Cys Leu Ser Leu
233      1075      1080      1085
235 Leu Cys Gln Gln Ile Leu Arg Asp Thr Phe Thr Glu Ser Cys Thr Arg
236      1090      1095      1100
238 Ile Ser Gln Asp Glu Arg His Lys Met Lys Gly Leu Leu Gly Asp Leu
239 1105      1110      1115      1120
241 Glu Val Ser Leu Glu Thr Leu Asp Ile Val Glu Asp Ser Ile Lys Lys
242      1125      1130      1135
244 Arg Ile Val Val Ala Ala Arg Asp Asn Trp Ala Asn Tyr Phe Ser Arg
245      1140      1145      1150
247 Ile Phe Pro Val Ser Gly Glu Ser Gly Ser Asp Val Gln Leu Leu Gly
248      1155      1160      1165
250 Val Ser His Arg Gly Leu Arg Leu Leu Lys Val Thr Gln Ser Pro Ser
251      1170      1175      1180
253 Phe His Leu Asp Gln Leu Lys Thr Leu Cys Ser Tyr Ser Tyr Ala Glu
254 1185      1190      1195      1200
256 Val Leu Thr Val Gln Cys Arg Gly Arg Ser Thr Leu Glu Leu Ser Leu
257      1205      1210      1215
259 Lys Asn Glu Gln Leu Ile Leu His Thr Ala Trp Ala Arg Ala Ile Lys
260      1220      1225      1230
262 Ala Met Val Asp Leu Phe Leu Ser Glu Leu Arg Lys Asp Ser Gly Tyr
263      1235      1240      1245
265 Val Ile Ala Leu Arg Ser Tyr Ile Thr Asp Asp Asn Ser Leu Leu Ser
266      1250      1255      1260
268 Phe His Arg Gly Asp Leu Ile Arg Leu Leu Pro Val Thr Ala Leu Glu
269 1265      1270      1275      1280
271 Pro Gly Trp Gln Phe Gly Ser Ala Gly Gly Arg Ser Gly Leu Phe Pro
272      1285      1290      1295
274 Asp Asp Val Val Gln Pro Ala Ala Pro Asp Leu Ser Phe Ser Leu
275      1300      1305      1310
277 Gly Lys Arg Asn Ser Trp Gln Arg Lys Ser Lys Leu Gly Pro Ala Gln
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280 Glu Val Arg Lys Thr Glu Glu Val Lys
281      1330      1335
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285 <211> LENGTH: 6293
286 <212> TYPE: DNA
287 <213> ORGANISM: Mus sp.
289 <220> FEATURE:
290 <223> OTHER INFORMATION: Mouse myosin related protein (MRP) variant 1 cDNA
292 <400> SEQUENCE: 2

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293 cgctgggact gtcacctacc aggtgcacaa gttcataaac agaaacaggg gccacctgga 60
294 ccccgctgtg ctggagatgc tcaggcagag ccagctgcag gtgacctagc ctctctttca 120
295 gctcatgggc agcctgttcc aagaagcaga gcccaggtt gggactgagc aaaacaaacc 180
296 cacattggcc tctcgattcc agcagaccct ggggtgactt ctgactcggc taggcagcag 240
297 gggccatgtc tacgtcatcc actgtctcaa tcccaccctt ggaaagatcc caggcctctt 300
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299 ccggagtacc cacttccccg tgcgagtgtc ctccaagtc tttctggcaa ggttccatgc 420
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308 ccaggccttg ctgacgggga gcatcacaga gtccctgcca cctgaggctc ccgccggcc 960
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340 tccacgccc caaccagca gggaaatcc aaacatcatc cgaatgtacc agagccgtcc 2880
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